

Engineering Specification

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

Series CWS-200HF

Commercial Water Softening Systems

Connection Size: 2"
 Flow Rates: Up to 126 gpm (477 lpm)

Watts Series CWS-200HF and CWSP-200HF water softening systems are highly efficient cation exchange type water softeners. These pre-engineered systems are suitable for commercial applications ranging from 60,000 to 600,000 grains of hardness removal and flow rates up to 126 gallons per minute. Regeneration is meter demand initiated. Where continuous softened water is required CWSP-200HF duplex progressive systems can be specified for uninterrupted service. Regeneration is meter demand initiated. All cycles of regeneration are fully automatic and do not require manual actuation.

Watts Series CWS-200HF and CWSP-200HF water softeners are designed for point of use or point of entry applications where the benefits of softened water are required. These systems exchange scale forming calcium and magnesium ions with non-scale forming sodium ions to create soft water for a variety of applications.

Steam boilers make up water, water heater pretreatment, reverse osmosis pretreatment, cooling tower make up water, sterilizer make up water, washing, and process water are all common applications for the Watts Series CWS-200HF and CWSP-200HF water softeners. Watts Series CWSP-200HF are ideal for commercial and industrial applications where high flow and high capacities are required to accommodate wide variances in flow rates.

Softened water provides a wide variety of benefits from not introducing scale into pipes, valves, water heating equipment, heat exchangers, and cooling towers to reducing mineral build up in areas that see excessive splashing such as food preparation counters and sink areas. Softened water also conserves soaps and cleaning agents by eliminating the formation of soap curd, so your cleaners can work on cleaning not reacting with the hardness in your water.

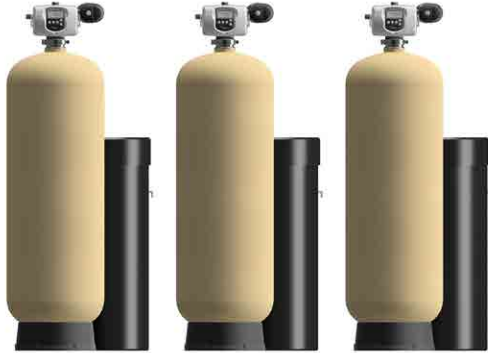
Features

- Durable brass bodied control valve for years of service
- Fully automatic metered demand control valve certified to NSF/ANSI standards
- Sophisticated digital electronic controls that store operating history that can be accessed by the user
- Fully adjustable regeneration cycles
- High-capacity resin certified to NSF/ANSI standards
- Highly corrosion resistant fiberglass tanks certified to NSF/ANSI standards
- Durable polypropylene lower distribution system



Series CWS-200HF

Series CWSP-200HF Duplex



Series CWSP-200HF Triplex

CWS-200HF Features

- Model for capacities up to 600,000 grains per tank
- Pre-engineered systems with up to 3 tanks in parallel for flow rates up to 370 GPM
- Arrange up to 16 tanks in parallel for higher flow and capacity custom configurations*
- All systems have no hard water bypass valve
- Each softening vessel comes complete with brine tank and meter
- All systems have stainless steel in-line flow meters
- Modbus Capable

*Must contact your Watts representative for proper equipment selection of system sizes exceeding 3 mineral tanks.

⚠ WARNING

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



Standards

- Control Valve- Certified to NSF/ANSI Std. 61 and 372
- Ion Exchange Resin- Certified to NSF/ANSI Std. 61 and 372
- Mineral Tank- Certified to NSF/ANSI Std. 44 or 61

Specification

A Watts Series [CWS-200HF] and [CWSP-200HF] Model # [] water softening system shall be installed on the building's main water line just after it enters the building. The installation point shall be after any backflow prevention or pressure regulating valves. Other installation options are to install a system just before the water heater or other types of equipment needing the protection of softened water. In installations where dedicated cold water make up to a water heater is the installation point, a backflow preventer and a thermal expansion tank must be installed as well. The system shall be installed with a bypass valve to allow for the shut down and removal of the unit without interrupting the water supply to the building.

The water softener shall be a down flow regenerated, metered demand, sodium cycle cation exchange type system with all components necessary for proper operation.

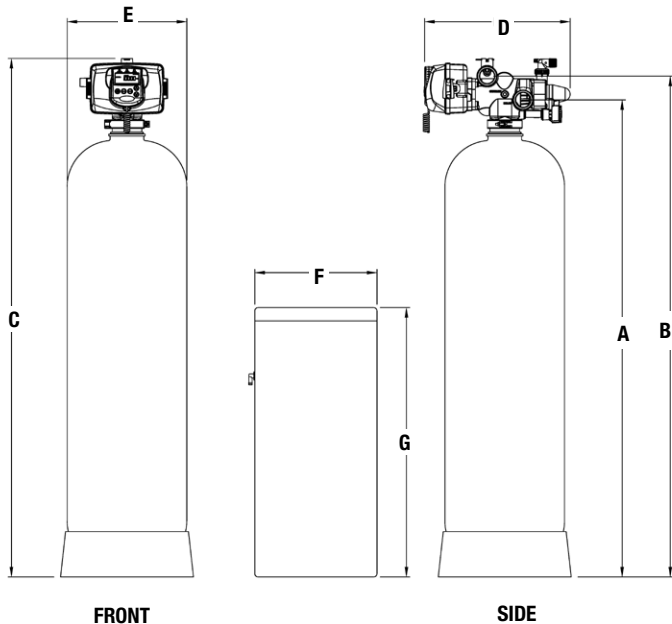
Electrical requirements are 120-volt 60 hertz. A local drain is required to accept drain water from the system. The feed water pressure must not fall below 25psi or exceed 125psi. Water temperature must not fall below 34°F or exceed 110°F (1°C - 43°C). The system shall provide softened water measuring less than one grain per gallon of hardness as Calcium Carbonate when operated within the manufacturer's operational guidelines.

Feed Water Guidelines

pH	6 to 10
Hardness (maximum)	Depends on customers acceptable hardness leakage level.
Water Pressure	25psi to 125psi (171 kPa to 8.5 bar)
Temperature	34 - 110°F (1 - 43°C)
Free Chlorine (maximum)	1mg/L
Iron (maximum)	1mg/L
Oil and H2S	None Allowed
Turbidity	Less than 5.0 NTU
Total Dissolved Solids	Must be below 750mg/l for the softener to produce less than 1 grain per gallon soft water.

For all other guideline information please contact your Watts representative.

Dimensions - Weight



Series CWS-200HF

MODEL NO.	DIMENSIONS												WEIGHTS			
	A		B		C		D		E		F		G		lb	kg
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
M4558WH-NH	77¼	1962	79⅞	2021	84	2134	24	610	24¼	616	30	762	50	1270	710	322
M4559WH-NH	77¼	1962	79⅞	2021	84	2134	30	762	30¼	768	39	991	48	1219	1160	562
M4560WH-NH	77¼	1962	79⅞	2021	84	2134	36	914	36¼	921	39	991	48	1219	1560	707

Specifications

MODEL NO.	TANK SIZE	MINERAL TANK		BRINE TANK		SOFTENING CAPACITY		LBS. SALT PER REGENERATION		FLOW RATE & PRESSURE		
		RESIN Ft³	GRAVEL	TANK SIZE	SALT FILL	MAX	MIN	MAX	MIN	SERV GPM	DROP PSI	BKW GPM
M4558WH-NH	24" x 72"	10	200 lbs.	30" x 50"	1200	300 K	200 K	150	60	75/97	15/25	15
M4559WH-NH	30" x 72"	15	400 lbs.	39" x 48"	2200	450 K	300 K	225	90	88/113	15/25	25
M4560WH-NH	36" x 72"	20	500 lbs.	39" x 48"	2200	600 K	400 K	300	120	97/126	15/25	35

NOTICE Capacities are based on resin manufacturer's data and are dependent upon influent water TDS, temperature, bed depth, and flow rates. Feed water must be free of oil and color. Pipe size, tank size, and space requirements are in inches. Capacities and flow rates expressed above are per tank. Flow rates listed at 25psi drops are for intermittent peak flow rates and are not to be used as continuous flows.

NOTICE Flow rates listed above are based on pressure drop only. Selecting a system based on pressure drop alone does not guarantee that the system will provide adequately softened water. System selection should be based on resin quantity, capacity required, feed water analysis, and application requirements.

Ordering Information for 2" Simplex (CWS-200HF), Duplex, and Triplex (CWSP-200HF) Softeners

MODEL NO.	ORDERING CODES	DESCRIPTION	SPACE REQUIRED D X W X H	WEIGHT LBS
M4558WH-NH	68110445	10 Cubic Foot 2" Simplex Softener with Flow Meter	30" x 60" x 96"	710
M4559WH-NH	68110446	15 Cubic Foot 2" Simplex Softener with Flow Meter	39" x 75" x 106"	1160
M4560WH-NH	68110447	20 Cubic Foot 2" Simplex Softener with Flow Meter	39" x 81" x 107"	1560
M4558WHTI-NH	68110800	10 Cubic Foot 2" Progressive Duplex Softener with Flow Meter	59" x 65" x 98"	1420
M4559WHTI-NH	68110801	15 Cubic Foot 2" Progressive Duplex Softener with Flow Meter	74" x 73" x 104"	2320
M4560WHTI-NH	68110802	20 Cubic Foot 2" Progressive Duplex Softener with Flow Meter	80" x 85" x 108"	3120
M4558WHTR-NH	68110808	10 Cubic Foot 2" Progressive Triplex Softener with Flow Meter	59" x 97" x 98"	2130
M4559WHTR-NH	68110809	15 Cubic Foot 2" Progressive Triplex Softener with Flow Meter	74" x 109" x 104"	3480
M4560WHTR-NH	68110810	20 Cubic Foot 2" Progressive Triplex Softener with Flow Meter	80" x 127" x 108"	4680

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.



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